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Equality, Justice and Feasibility: An Ethical Analysis of the WBGU's Budget Approach

Abstract: According to the Budget Approach proposed by the German Advisory Council on Global Change (WBGU), allocating CO_2 emission rights to countries on an equal per-capita basis would provide an ethically justified response to global climate change. In this paper, we will highlight four normative issues which beset the WBGU's Budget Approach: (1) the approach's core principle of distributive justice, the principle of equality, and its associated policy of emissions egalitarianism are much more complex than it initially appears; (2) the "official" rationale for determining the size of the budget should be modified in order to avoid implausible normative assumptions about the imposition of permissible intergenerational risks; (3) the approach heavily relies on trade-offs between justice and feasibility which should be stated more explicitly; and (4) part of the approach's ethical appeal depends on policy instruments which are "detachable" from the approach's core principle of distributive justice.

Keywords: climate justice; emissions egalitarianism; burden sharing; Budget Approach; risk; feasibility

1. Introduction

It is safe to say that any future climate treaty on the international level will have to include a mechanism for burden sharing in climate change mitigation and adaptation. One such mechanism is the German Advisory Council's Budget Approach (WBGUBA), which argues for an equal per capita distribution of emission rights based on a global emissions budget. Starting with the commitment to limiting average global temperature increase to 2°C, the WBGU proposes the adoption of a budget approach, which specifies a strict upper-limit for the world's overall emissions. The budget is determined by four variables: the start and the end year; the probability with which the 2°C goal has to be achieved; and the demographic reference year in light of which national emission budgets are calculated. Depending on how these four variables are defined one arrives on a larger or smaller carbon budget. The WBGUBA (2009: 27) adopts the timespan of 2010 to 2050 and calculates that for this period and a two-thirds probability of achieving the 2°C guardrail, we have a global carbon budget of 750 Gt CO_2 from fossil sources. This global budget is then to be distributed amongst the world's states on an equal per capita basis. After 2050, all states would only be allowed minimal CO_2 emissions, meaning that in the years up to 2050 all states would have to radically invest in low carbon technologies and non-fossil-based fuels and energy sources.

In addition to the calculation and distribution of the actual budget, the WBGU puts forth a range of further policy recommendations, such as the establishment of a *World Climate Bank* (WCB). One of the primary functions of the WCB would be to monitor countries' efforts to stay within their carbon allowances and to progress towards a low carbon future. To this end, the WCB will have to enjoy significant powers to supervise, criticise and possibly sanction countries that fail to comply with their climate responsibilities. The other key function of the WCB is to organise an international emission certificates trading scheme, which allows countries that do not stay within their allocated budget to buy additional emission certificates from developing countries which do not exhaust their quota. The WBGU assumes that this trading scheme will generate major revenue streams for developing countries, which can invest these into the development and deployment of low carbon technologies. Furthermore, the WBGU suggests that the WCB should be in charge of a range of funding pots, set up by payments of individual countries according to their historical contribution to causing anthropogenic climate change, so as to provide poor developing countries with grants and loans to develop in climate-friendly and sustainable ways.

According to the WBGU (2009), the WBGUBA is not only politically feasible and effective with regard to achieving the world's climate targets, but it is also ethically well justified and fair. In

this article, we question whether from a normative viewpoint that is indeed the case. The WBGUBA initially draws on three normative principles, namely, the *polluter pays principle*, the *precautionary principle* and the *principle of equality*.[1] As our arguments will show, despite being intuitively plausible this threefold normative basis of the WBGUBA proves rather problematic. First, with respect to the principle of equality, we argue that the ethical core of the approach relies on a controversial reading of the principle of equality and that it is quite questionable whether the associated idea of emissions egalitarianism is normatively plausible (section 2). Second, with respect to the precautionary principle and the issue of acceptable risks, we suggest that the "official" rationale for calculating the budget could be repaired by avoiding a contestable assumption about acceptable intergenerational risk impositions, which is a concern of the precautionary principle (section 3). And third, with respect to the polluter pay principle, we highlight how justice (and in particular historical responsibility) is outsourced in the interest of 'political feasibility' by showing how the polluter pays principle moved from being one of the core principles for determining the budget to being a variable for calculating the financial commitments states have to make to funding the world climate bank and its associated mechanisms (sections 4 and 5).

2. The Principle of Equality

Unfortunately, the WBGU does not use a single formulation of the principle of equality. At one occasion, the principle of equality is equated with the idea that all individuals should have equal per capita emission rights for the timespan 2010 to 2050 (WBGU 2009: 23). However, this formulation of the principle of equality seems to derive from a more fundamental formulation of the principle, namely, that all individuals have "equal rights, without distinction, to the benefits of the global commons" (WBGU 2009: 22). It is this – intuitively plausible – principle which does the heavy lifting within the WBGU's ethical justification of the Budget Approach. Therefore, in the remainder of this section we will scrutinise the WBGU's attempt to move from this general principle to its preferred reading of it, namely, that all individuals should have equal per capita emission rights for the timespan 2010 to 2050.

In terms of justifying the idea of equal per capita emission rights from the general principle "equal rights to the benefits of the global commons", we identify two main problems: i) the WBGU's implicit assumption that equal rights to x are the same as (equal) rights to *equal amounts*

1 The WBGU sees the budget approach draw on an even wider range of normative principles and considerations, including the principle of *ability-to-pay* and countries' *mitigation* capacities (WBGU 2009, 22). Note that strictly speaking one cannot please all these widely differing principles, since taken together, they are inconsistent. However, this is an issue we will not address in this paper.

of x and ii) the focus on emissions as the relevant benefits in question.

The first issue is a substantial one for the WBGUBA, since it is unclear how the Budget Approach moves from universal equal rights to the latter claim of equal shares. Put crudely, an equal right to x does not necessarily imply that all right-holders must receive equal amounts of x. It seems the WBGU moves too quickly from the general idea that all individuals share an equal status as right-holders to the claim that all individuals have an equal right to an *equal amount of x*, which is what the idea of equal per capita emissions rights propagates. The initial principle that all people enjoy "equal rights to the benefits of the global commons" only states a) that each and every person is a bearer of a right to the benefits of the global commons, and b) that with regard to this particular right all right-bearers are equal, which means that (at least initially) no person has a greater right, or better justified right, than any other person. However, postulating such an equal right is different from postulating an equal right to equal amounts of the object of the right: when we declare that all humans have an equal right to work, we mean to say that nobody (at least initially) has a better claim to work than anybody else. However, by this we do not intend to claim that all humans have a right to *equal work*. In fact, it is a common mistake to derive a right to equal amounts of x from the less controversial claim that certain rights are universal, i.e. that they are rights equally enjoyed by everyone. Therefore, in the case of the WBGU, in order to avoid a classical *non-sequitur* and in order to justify their reading of the initial principle as entailing a right to equal per capita emission-rights, the original principle would have had to read differently, namely, that all people have equal rights to *equal* benefits of the global commons. However, this is much more controversial.

The second major issue with the WBGU's interpretation of the principle of equality is its focus on equal emissions as the answer to the question of what people have a right to. This problem arises even if one were able to solve the first problem, discussed above.

According to the original formulation of the principle of equality, people have an equal right to the benefits of the global commons, while the WBGU argues for equal per capita emissions. The notion of benefits is obviously wider than the concept of emissions. However, on most plausible definitions of global commons it seems doubtful that emissions should actually be seen as benefits. The benefit people derive from the absorptive capacity of the earth's atmosphere, or the planet's entire greenhouse gas (GHG) assimilation capacity, is not as such that they can emit, but rather that they can enjoy emission-creating activities without directly related negative consequences. Hence, it is questionable whether the WBGU is justified in moving from a focus on benefits from the global commons to equal emission shares.

From an ethical point of view it seems odd to focus on emissions for at least two reasons: first, it is unclear why we should attach importance to or value emitting. While some activities will

necessarily involve the emission of GHGs, such as breathing, emitting as such does not seem valuable in and of itself. Ethically speaking, it seems reasonable to assume that we would want to attach importance to goals such as giving all people "secure access to the means of a decent life" (Hayward 2007: 432). What matters from the viewpoint of justice is not, at least in the first instance, that all people can emit a certain amount X, but that all people can lead a decent life, or secure their survival without undermining somebody else's ability to do the same, no matter whether that somebody else is a present or future person.

Second, even if we were to agree that emitting is an activity of such importance that we should make it the focal point of a particular ethical principle, i.e. that emissions are at least part of the proper currency, or metric, of climate justice, when it comes to discussing climate justice (which is the canvass on which the WBGUBA operates) it appears nonetheless too quick to make equal per capita emissions synonymous with climate justice. As Caney (2012: 259-260) points out, reducing climate justice to equal emission shares is both atomist and isolationist: Focusing on emissions is atomist because it focuses exclusively on the allocation of mitigation burdens, thereby neglecting additional climate change burdens, e.g. those regarding adaptation (a point we return to below);[2] moreover, equating equal emissions with climate justice is isolationist since it neglects wider questions of global and intergenerational justice (e.g. world poverty), which should inform one's conception of climate justice.[3]

However, even if we were to agree that we want to use the language of emission rights, since emission levels are a key aspect of addressing climate change, it is, from the viewpoint of justice, much more plausible to argue that all human beings have an equal right to decent living emissions (Rao and Baer 2012) than to claim that all people have a right to use up an equal share of a particular emissions budget, regardless of what emissions are produced by/for. Ethically speaking, we want to make sure that all people can lead a decent life without collectively emitting unsafe levels of GHG. This means that we want to prioritise necessary emissions, i.e. those that are required for meeting people's needs, over luxury emissions (Shue 1993). Doing so, however, might require an *unequal distribution of per capita emission rights*, since people's relevant circumstances (e.g. climate, availability of clean energy sources, access to food and water, etc.) and hence their need to emit to fulfil their needs differ significantly. Instead of aiming for an equal distribution of emission rights we could, thus, aim for a needs-based distribution of such rights (cp. Caney 2012). Either way, the point is that even if we couch climate justice in terms of emission rights what we

2 To be fair, the WBGUBA is supplemented with a scheme of financing adaptation, which at least partially takes into account that there are climate change duties beyond mitigation. We will return to this point in section 5.

3 We are grateful to Christian Baatz for forcing us to make the argument in this paragraph clearer.

normatively care about is what people can do and be with the emissions in question.

It seems then that the WBGU's use and interpretation of the principle of equality is subject to several penetrating normative criticisms, casting doubt on the WBGUBA's claim that equal emission shares will bring (climate) justice. However, even if one were to agree with the WBGU's interpretation of the principle of equality (which is a major 'if'), it yet seems unclear whether the Budget Approach is indeed – as the authors of the WBGUBA had hoped – in compliance with fairness and justice. It seems to us that this is questionable, not only because of the WBGUBA's focus on equal emission shares as the be all and end all of climate justice: as we argue in the two following sections, the WBGU seems to allocate equal emission rights for current people with too little regard for both, past injustices and overconsumption (section 4), and the risk which is imposed onto future people (section 3). What do we mean by this?

3. Repairing the Rationale for the Budget

Let us for the moment grant the premise that the emission budget is to be distributed equally amongst all. A prior question is: how large shall the budget be? In this regard, WBGUBA is an instance of the Tolerable Window Approach: it specifies a corridor of tolerable policies by providing a set of necessary conditions for any acceptable climate policy (Toth 2003: 8f.). According to WBGUBA, a policy is acceptable only if it is compatible with the 2°C guardrail, where (a) the 2°C guardrail is taken to be an operationalization of UNFCCC's objective to "prevent dangerous anthropogenic interference with the climate system" (UNFCCC 1992: Art. 2) and where (b) compatibility is given as long as the probability of limiting global warming to 2°C is at least 67%. Relying on the probabilistic analysis by Meinshausen et al. (2009), the WBGUBA determines the total global emission budget for the period of 2010–2050 to be 750 Gt CO_2 from fossil fuels.[4]

But this rationale for determining the budget is problematic for two reasons, a methodological and a normative one: first, the probabilistic criterion of compatibility with the 2°C guardrail requires robust and reliable probability density functions over the effects of total emission scenarios – functions which assign to each emission scenario a robust and reliable estimate for the probability that average global temperature increase (compared to pre-industrial level) is less than 2°C. The probability density functions used in Meinshausen et al. (2009) and similar studies are generated by model simulations, and both robustness and reliability of probability estimates so

4 Note that strictly speaking, Meinshausen et al. specify probability *ranges* only; WBGU's preferred 33% risk of exceeding the 2°C guardrail is just an "illustrative default case" of a probability range from 16% to 51% (2009: 1161, Table 1). Moreover, the probability ranges would have been even larger, if the Bayesian priors were varied more systematically. We are indebted to Gregor Betz for pointing this out.

generated are highly contested (Parker 2010): they are quite sensitive to contentious assumptions and likely to change substantially in the short term even if knowledge about the climate does not change fundamentally. But if robust and reliable probability functions are still out of reach, then strictly speaking, the probabilistic criterion of compatibility is not applicable and does not warrant an inference to the 750-Gt-budget (for a related critique, see Betz 2007, 2010; Stainforth et al. 2007).

But even if we suppose we could assign robust probability estimates to emission scenarios, there will be a second problem: determining the budget for an acceptable climate policy is a deeply normative issue, since the relevant sense of "acceptability" includes (but is not necessarily exhausted by) ethical aspects – a policy is overall acceptable only if it is acceptable from an ethical point of view. But does the probabilistic criterion of compatibility with the 2°C guardrail account for the ethical aspects? As the WBGU (2009: 24) acknowledges, it seems that the order of magnitude is wrong: the criterion allows a 33% risk of exceeding the 2°C guardrail, i.e. a one third chance of reaching a state which considerably increases the risk of severe harms like water shortage, crop failures, injuries and death. In many contexts, this would clearly be ethically unacceptable. For instance, we consider it impermissible to construct unreliable public water supply systems, shaky houses or faulty aeroplanes which run a similarly high risk of failing, collapsing or crashing. In fact even if the respective probabilities would be around 5%, we might not consider these houses or aeroplanes acceptable. So if there were a strict threshold probability for compliance with the 2°C guardrail, it would lie nearer to 0.33% than to 33%.[5]

This means that from an ethical point of view, there is strong pressure towards lower probabilities for exceeding the 2°C guardrail, i.e. towards an even smaller total emission budget. As the WBGU is ready to admit, a smaller budget may be ethically desirable, but politically infeasible: "[i]n order to create more political leeway, [...] a greater climate risk is consciously accepted" (WBGU 2009: 27). But this suggests that the "true" rationale for the 750-Gt-budget accepts the normative premise that

(N) We ought to keep the risk of exceeding the 2°C guardrail (and the corresponding total emission budget) as low as possible

but disputes the descriptive premise that

5 One might object that limiting the risk to 0.33% is no longer possible (WBGU 2009: 24). Even if true, it would still remain questionable whether 33% is the *smallest* possible risk which we can still achieve. This leads directly to the following discussion.

(D) It is possible (in the sense of politically feasible) to reach an agreement on a total emission budget smaller than 750 Gt.

Given this modified rationale, the 750-Gt-budget is the outcome of trying to minimize the risk of unacceptable climate harms within the set of feasible policies. So, cutting-off the budget at 750 Gt would not be justified by appeal to a normative claim about which probability level for exceeding the 2°C guardrail is still ethically acceptable, but rather by appeal to a descriptive claim about political feasibility.

This rationale seems much more promising, because it does not depend on specifying the criterion of a policy's acceptability in terms of a strict probability threshold: although it is true that the criterion will say that a policy is acceptable only if it minimizes the risk of exceeding the 2°C guardrail, we do not have to quantify that probability, because we can safely assume that the risk of a certain global mean temperature increase is a monotonically increasing function of the total emission budget. Minimizing the risk of exceeding 2°C just *means* minimizing the total emission budget within the set of feasible alternatives. This rationale thus avoids the quite implausible claim that acceptability is constituted by a probability threshold of 67%. Moreover, it transforms the hopelessly contested normative issue about the true value of that threshold for acceptable climate policies (is the threshold probability at about 97%, at 99.7% or at 99.97%?) into an empirically resolvable descriptive disagreement about which policies are politically feasible and which are not.

4. Trading-Off Justice and Feasibility

So on the most plausible interpretation of WBGUBA's rationale, the determination of the budget is essentially driven by the aim of ensuring high political feasibility (cp. WBGU 2009: 25). This points towards a more general issue which is hotly debated within contemporary ethics under the heading of "non-ideal theory" – the question whether and to what extent ethical requirements and duties of justice are constrained by practical-political issues of simplicity, feasibility and implementation (cf. Cohen 2003, 2008; Sangiovanni 2008; Valentini 2012).

The "deep" argument supporting the WBGUBA could then be read as stating that the WBGUBA is the most just pareto-optimal "combination" between justice and feasibility, i.e. as stating that (a) by shifting to any other proposal, it is neither possible to increase justice without decreasing feasibility nor possible to increase feasibility without decreasing justice and that (b) the WBGUBA is the most just among those proposals satisfying (a). Evidently, the WBGU (2009) does not provide this argument explicitly. But versions of this argumentative scheme are implicitly

instantiated at several stages of the WBGU framework, e.g. when choosing the start year of the period for which the budget is in effect (WBGU 2009: 24–28): WBGU considers two policy options – (I) start year 1990 and (II) start year 2010 – and ultimately favours option (II). The argument for this recommendation is illustrative (WBGU 2009: 25): While option (I) would implement the polluter pays principle to a considerable extent and thus emphasize historical responsibility, it would also imply that countries such as the USA, Germany and Russia are "carbon-bankrupt" right from the beginning of WBGUBA's implementation. It seems that neither of these countries will agree to this proposal – even if supplemented by emission trading, since this option "appears difficult to carry through as it would greatly limit the industrialized countries' scope for action" (WBGU 2009: 25). In other words, option (I) is not politically feasible. Therefore, the WBGU recommends to pursue the more feasible option (II), although it is less sensitive to historical responsibility.

In essence, what happens here is that the WBGU sacrifices an ethical aspect (historical responsibility) in favour of feasibility. One may reply that this is not problematic because there is no real choice here: what is the point of recommending a utopian policy option which is known to be unrealizable? But we think that this reply is too quick and hides an implicit *normative* premise, thereby glossing over a complex ethical assessment. To reveal this premise, we have to remember that feasibility comes in degrees and is not a binary matter: strictly speaking, *any* policy option with non-zero probability is possible, and therefore politically feasible. It is just that different policy options are more or less likely to be agreed upon: it is not impossible that a binding agreement along the lines of the ethically demanding option (I) comes into force – it is just quite unlikely; and it is more likely that the parties will agree on something similar to option (II). It is in that sense of "being more likely to be agreed upon" that (II) is held to be "feasible", while (I) is not.

If this is true, then – by employing instances of the argumentative scheme to the effect that some proposal is the most just pareto-optimal "combination" between justice and feasibility – policy advisers who aim for a unique policy recommendation will typically face probability-adjusted *trade-offs* between recommending a more just, but less likely agreed-upon option like (I) and a more likely agreed-upon, but less just option like (II). The mere fact of engaging in such trade-offs between justice and feasibility expresses a normative commitment: that it is important to reach *some* (albeit: a less just) agreement rather than none at all. Of course, we do not deny that this is a sensible commitment to have, especially in the context of climate change, where the threat point of the bargaining set (unmitigated climate change) seems to be catastrophic from an ethical point of view. But we want to emphasize that this shows that the WBGU's recommendation of (II) has a more complex normative justification: WBGUBA values the increase in the likelihood of reaching

an agreement under option (II) higher than the decrease in justice when (II) is realized instead of (I). So the recommendation of (II) is based on a value judgement along the lines of

(V) probability [agreement on (II)] x value of (II) > probability [agreement on (I)] x value of (I)

Is (V) true? We think it is prudent and overall justified to stick to (V). But what we object to is that this trade-off between justice and feasibility is not made more explicit. The communication of policy recommendations should emphasize on what grounds a recommendation is given – in this case, on grounds of taking into account people's limited motivation to agree on the ethically better policy and on grounds of trading-off an increase in reaching an agreement against a decrease in justice. To emphasize this is important for two reasons: first, as we have shown, the trade-off itself is based on certain normative assumptions, which shall be open to public discussion among democratically authorized decision-makers rather than implicit in the policy recommendation of an advisory council. And second, being transparent about the trade-off between justice and feasibility also makes clear that options *other* than the recommended one would have been preferable from an ethical point of view. To be frank about this is important because the probabilities for reaching agreements are not fixed but variable, given that people's beliefs and limited motivation can be changed. Emphasizing ethical deficits of policy options can trigger such a change by inducing remorse and appealing to people's sense of justice, thereby increasing the probabilities of agreement upon which the recommendation relies. Conversely, slurring over ethical deficits may encourage policy makers to settle for and be content with an ethically suboptimal policy option. So, playing down the ethical opportunity costs may itself be a barrier to ethical improvement and progress. Policy advisers should therefore be sensitive to how their advice may perpetuate the motivational limits upon which their recommendation rests. Communicating the trade-off in (V) and the ethical deficits of policy options more clearly could contribute to overcome these limits.

5. Outsourcing Justice

In its attempt to put the core ethical principle of equality into practice, the WBGU augments its framework by a flexible emission trading mechanism. This is certainly motivated by considerations of feasibility, since it helps to avoid early carbon bankruptcy and enhances the proposal's political acceptability; but it also brings up yet another distinct ethical issue, that of "outsourcing justice". By this we mean that the WBGU presumably tries to overcome the ethical shortcomings of the exclusive focus on equality and the problems in determining the budget (see sections 2 and 3) by means of accompanying policy instruments like emission trading and a "World Climate Bank":

emission trading ensures that ethically relevant differences in need can be met – anyone who requires emissions for the satisfaction of basic needs to an extent that exceeds his assigned per-capita budget can buy the required emission rights on the market. Moreover, emission trading has a positive ethical externality, since it prospectively induces substantial financial transfers from highly developed countries to low developed countries. And the rationale behind the World Climate Bank is that countries with high emissions between 1990 and 2010 will substantially finance the adaptation measures funded by this bank. This is supposed to compensate the deficit in accounting for historical responsibility by setting 2010 as a start date of the budget allocation.

The strategy of outsourcing justice and historical responsibility to these policy instruments raises two distinct issues. First, we shall not overrate the limited prospects of repairing injustice through emission trading and the availability of loans and grants from the world climate bank: if the initial equal-per-capita allocation of emission right has a justice deficit (as we have argued it has, cp. section 2), then that deficit also "infects" all market transactions based upon the initial allocation. For instance, one might argue that although emission trading helps the needy (since it "will bring about considerable financial and technological transfers, which could in turn open up attractive possibilities for sustainability investments for the countries supplying emission allowances" (WBGU 2009, 3), it is still unfair that the needy will have to sell their allowances at a market price which emerges from "normatively distorted" demand functions; these are normatively distorted in the sense that they do not represent the willingness to pay of high-polluters, which they would have had if the initial allocation assigned to them would have been based on a different conception of entitlement: no emission right at all (given that they had already used up their fair share of the unregulated resource).[6]

And second, it is important to note that the proposed policy instruments are *detachable* in the sense that they can be freely combined with *any* initial distribution of the budget (Roser and Seidel 2013: 119). This means that whatever ethical merits these instruments might have, any other scheme of distributing the budget (e.g. according to need or ability to pay) could also be enhanced by them. This implies that (a) adding these instruments does nothing to decide the controversy about which distributive scheme is best from an ethical point of view and that (b) the framework's normative basis is pluralistic: there is nothing in the nature of the value of *equality* that commits one to emission trading or funding adaptation measures through a World Climate Bank. Instead, these

6 Moreover, outsourcing justice to other policy instruments may generate inconsistencies in the WBGUBA's normative underpinnings. E.g. when discussing various possibilities of generating funds for the WCB, the WBGU (2009, 37) considers auctioning off permits, which would be withdrawn from the national budget of low emitting countries who will not use their budget up even under high growth scenarios. This does not fit well with the WBGU's favoured interpretation of the principle of equality.

policy instruments owe their normative advantages to ethical considerations like helping the needy (by the monetary transfer initiated through emission trading) or historical responsibility (as in the proposal about how to finance the World Climate Bank), which are quite distinct from equality.

If this is true, then the "deep" justification for the WBGUBA is very different from its "official" statement (WBGU 2009): Rather than being supported by the fact that it is consistent with an inconsistent set of principles of justice, the contextualized WBGUBA – i.e. the equality-oriented framework augmented by emission trading and an adaptation funding mechanism like the World Climate Bank – rests on a normatively much more complex (and more debatable) argument: an argument according to which the combination of (a) an egalitarian principle of distributive justice, (b) a needs-oriented policy instrument (emissions trading) and (c) a responsibility-oriented adaptation funding mechanism yields the best Pareto-optimal trade-off between feasibility and justice.

6. Conclusion

While we share many of the goals and intuitions underlying this approach, and we think that overall, the WBGUBA is still one of the ethically best proposals on the table, our arguments suggest that the WBGUBA's threefold normative underpinnings are nonetheless problematic: first, the particular reading of the principle of equality which WBGUBA is committed to proves controversial; second, to avoid contestable assumption about acceptable intergenerational risk impositions, it is important to be more explicit about the trade-offs between justice and political feasibility – in particular because, third, this affects the normative role that historical responsibility (or the polluter pays principles) plays within the approach's ethical justifiability: historical responsibility is no longer central to calculating the budget and the initial allocation of permits, but ultimately outsourced to other policy instruments. Of course, this criticism does not imply that the WBGUBA should be completely abandoned. Rather, our aim was to *constructively* challenge the WBGUBA by carefully analysing its ethical justification and suggesting alternative rationales for WBGUBA's different elements.